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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,458	01/16/2004	Christian Knopfle	60,500-116	7719
27305	7590	11/22/2004	EXAMINER	
HOWARD & HOWARD ATTORNEYS, P.C. THE PINEHURST OFFICE CENTER, SUITE #101 39400 WOODWARD AVENUE BLOOMFIELD HILLS, MI 48304-5151			GONZALEZ, MADELINE	
			ART UNIT	PAPER NUMBER
			2859	

DATE MAILED: 11/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/759,458

Applicant(s)

KNOPFLE ET AL.

Examiner

Madeline Gonzalez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/3/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Objections

1. Claim 10 is objected to because of the following informalities:
 - a) Claim 10: The claim recites the limitation "the surface" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

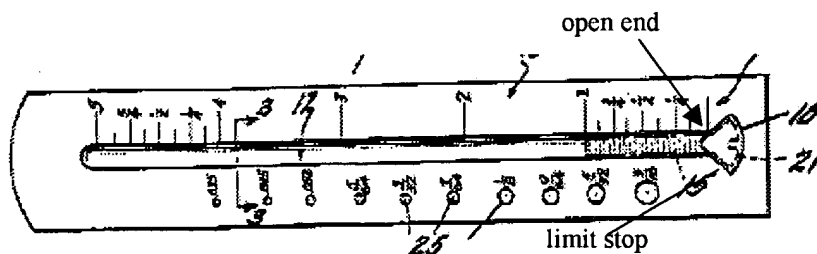
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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hite (U.S. 3,230,628) in view of Cronk (U.S. 1,860,174).

Hite discloses a measuring device for bone screws, as shown in Fig. 1, the device including a surface and having:

- a receiving groove 12 for bone screws 15, the receiving groove 12 being located in the surface or a portion near the surface, the receiving groove 12 being associated with a limit stop to cooperate with a received bone screw 15 and with a length measuring scale for a bone screw 15, the receiving groove 12 and the associated limit stop having a selectivity with respect to the shaft diameter of the bone screw 15 which can be received in the receiving groove 12;



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- wherein the measuring device further comprises an opening 16 being associated with the receiving groove 12 and the opening cross-section of the opening 16 which is associated with the receiving groove 12 being adapted to the associated selectivity;
- wherein the opening 16 is arranged in the surface in which the receiving groove 12 is formed;
- wherein receiving groove 12 has an open end in the area of a face of the device, said face running essentially vertically to the surface;
- wherein the limit stop is arranged in the region of the face or is formed from the face;
- wherein the limit stop is formed to cooperate with the underside of a screw head;
- wherein the limit stop has, opposite each other, two limit areas, the distance of which from each other defining the selectivity; and
- wherein the receiving groove 12 has an open angle range with reference to the surface, with respect to an axis of symmetry which runs along its axial extension.

Hite lacks multiple receiving grooves having a selectivity with respect to the shaft diameter of screws, multiple receiving openings with different opening cross-sections, and the specific open angle range of the receiving grooves.

With respect to the multiple receiving grooves having a selectivity with respect to the shaft diameter of screws, and multiple receiving openings with different opening cross-sections: Cronk discloses a measuring device, as shown in Fig. 1, having multiple receiving grooves 6-13 having a selectivity with respect to different shaft diameters of rivets, and multiple receiving

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openings 16-23 with different opening cross-sections. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the measuring device disclosed by Hite by providing multiple receiving grooves and multiple receiving openings as taught by Cronk in order to measure the length of bone screws of different diameters.

With respect to the specific open angle range of the receiving grooves, i.e., between 20 and 240 degrees, and less than approximately 175 degrees: Hite as modified by Cronk disclose a measuring device for measuring bone screws of different shaft diameters, said device having receiving grooves having an open angle range with reference to the surface, with respect to an axis of symmetry which runs along their axial extension. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the "optimum range" involves only routine skill in the art. See *In re Aller*, 105 USPQ 233. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide the grooves disclosed by Hite as modified by Cronk with an open angle of between 20 and 240 degrees, and less than approximately 175 degrees, as claimed by applicant, in order to properly support the bone screws.

5. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hite (U.S. 3,230,628) in view of Cronk (U.S. 1,860,174).

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Hite discloses a measuring device for bone screws, as shown in Fig. 1, the device including a surface and having:

- a bone screw 15;
- a receiving groove 12 for bone screw 15, the receiving groove 12 being located in the surface or a portion near the surface, the receiving groove 12 being associated with a limit stop to cooperate with a received bone screw 15 and a length measuring scale, the receiving groove 12 and the associated limit stop having a selectivity with respect to the shaft diameter of the bone screw 15 which can be received in the receiving groove 12; and
- wherein the bone screw 15 has differently formed or dimensioned transitions from screw shaft to a screw head.

Hite lacks multiple bone screw types, and multiple receiving grooves having a selectivity with respect to the shaft diameter of screws.

With respect to the multiple bone screw types and the multiple receiving grooves having a selectivity with respect to the shaft diameter of screws: Cronk discloses a measuring device, as shown in Fig. 1, having multiple receiving grooves 6-13 having a selectivity with respect to different shaft diameters of rivets, for receiving multiple screw types. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the measuring device disclosed by Hite by providing multiple screws and multiple

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receiving grooves for receiving the screws as taught by Cronk in order to measure the length of bone screws of different diameters.

6. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hite (U.S. 3,230,628) in view of Cronk (U.S. 1,860,174) as applied to claims 10 and 11 above, and further in view DiCarlo (U.S. 5,180,388).

Hite as modified by Cronk disclosed all the subject matter claimed above in paragraph 5 with the exception of a bone drill, information about a current drilling depth attached to the drill and corresponding information provided on the measuring device, and the information about the drilling depth including a color scale.

With respect to the bone drill, the information about a current drilling depth attached to the drill and corresponding information provided on the measuring device, and the information about the drilling depth including a color scale: DiCarlo discloses a device, as shown in Fig. 1, having a bone drill 30 insertable to different depths into a bone 40. wherein information about a current drilling depth is attached to the bone drill 30 and corresponding information 22 is provided on a device 20, and wherein the information about the drilling depth includes a color scale (see column 2, lines 66-68 and column 3, lines 1-5). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to add a bone drill as taught by DiCarlo to the device disclosed by Hite as modified by Cronk in order to

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provide the user with an accessible bone drill to be used during surgery. Once the modification is made, i.e., the bone drill is located on a surface of the measuring device disclosed by Hite as modified by Cronk, the information 22 will be on the measuring device.

7. Claims 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hite (U.S. 3,230,628) in view of Cronk (U.S. 1,860,174).

Hite discloses a measuring device for bone screws, as shown in Fig. 1, the device having:

- a surface;
- a receiving groove 12 for a bone screw 15 located in the surface or at least partially under the surface, the receiving groove 12 being associated with a length measuring scale for determining the length of a bone screw, the receiving groove 12 further having a stop for cooperating with a received bone screw 15, wherein the receiving groove 12 and the stop associated with the receiving groove 12 have a selectivity with respect to the shaft diameter of the bone screw 15 that can be inserted in the receiving groove 12;
- wherein the receiving groove 12 has an open end in a portion of the measuring device running essentially vertically to the surface, the open end allowing an insertion of the bone screw 15 in the receiving groove 12;
- wherein the stop is formed by the open end or arranged in the vicinity of the open end; and

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- wherein the stop is formed to cooperate with undersides of bone screw heads.

Hite lacks and multiple receiving grooves having a selectivity with respect to the shaft diameter of screws.

With respect to the multiple receiving grooves having a selectivity with respect to the shaft diameter of screws: Cronk discloses a measuring device, as shown in Fig. 1, having multiple receiving grooves 6-13 having a selectivity with respect to different shaft diameters of rivets, for receiving multiple screw types. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the measuring device disclosed by Hite by providing multiple screws and multiple receiving grooves for receiving the screws as taught by Cronk in order to measure the length of bone screws of different diameters.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Allard et al. ('648) discloses an orthopedic gauge. Jones, Jr. and Baxter-Jones et al. ('817) disclose devices having a color-coded scale. Spranza, III discloses a medical instrument for measuring depth of fastener hole in bone. Vecchiarelli and Welt disclose drill gauges. Schorr, Holladay, Moe and Hausknecht disclose related screw gauges.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Madeline Gonzalez whose telephone number is (571) 272-2243. The examiner can normally be reached on Monday-Friday (8:00-5:30), alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F.F. Gutierrez can be reached on (571) 272-2245. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MG



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